

means comprises:

an output transformer having an array of pins and a plurality of leads connecting to said heater elements; and

a receptacle mounted on said circuit board for receiving said array of pins of said output transformer.--

Remarks

I. Introduction

Claims 1-28 are pending in this application.

Claims 1-6 are allowed.

Claims 7-16, 18-21, 27 and 28 are rejected.

Claims 17 and 22-26 are objected to.

Claims 29-34 have been added.

Claims 7 and 18 are amended. No new matter has been added.

Claims 1-34 are presented herein for review and reconsideration by the Examiner.

II. Summary of the Office Action

The Office Action rejects claims 7, 8, 10, 15, 19, 21 and 27 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,367,229 to Yang (hereinafter referred to as "Yang").

Specifically, the Examiner states that Yang shows a module for driving a gas discharge lamp in response to electrical power supplied from a source comprising: means for receiving power from a source, an oscillator coupled to the receiving means for transforming power into an output

signal at a frequency and voltage that causes the lamp to produce visible light through gas discharge within the lamp, and a circuit board having the oscillator mounted thereon, wherein the circuit board is attached to the lamp. As explained below, Applicant respectfully submits that the claims are not anticipated by Yang and respectfully requests that the §102(b) rejection be withdrawn.

The Office Action also rejects claims 9, 16, 18, 20 and 28 under 35 U.S.C. 103(a) as being unpatentable over Yang. Specifically, the Examiner states that while “Yang does not explicitly teach the recited internally attached circuit board”, it does teach that the lamp structure may be formed as an attachment to a ballast circuit mounted to some form of circuit board, and that the lamp may be formed as a wholly separate structure which may then be attached to a ballast via sockets. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the circuit board as the means by which an oscillator circuit is mounted and attached to the lamp. The Examiner also states that, with respect to claims 16 and 28, it would have been obvious to one having ordinary skill in the art to by-pass a rectifier circuit and provide DC power directly to a converter circuit for oscillation.

Furthermore, the Office Action also rejects claims 11-14 under 35 U.S.C. 103(a) as being unpatentable over Yang in view of U.S. Patent No. 4,970,438 to Nilssen (hereinafter referred to as “Nilssen”). Specifically, the Examiner states that while “Yang does not explicitly teach the recited heater elements”, Nilssen discloses a ballast circuit that employs heater elements that are supplied power through output transformers. The Examiner concludes that it would have been

obvious to one of ordinary skill in the art at the time of the invention was made to use power supplying circuitry such as taught by Nilssen.

Finally, the Office Action states that claims 17 and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 1-6, which are the same claims as were patented in original U.S. Patent No. 5,654,609 except for the correction of minor typographical errors, are allowed.

III. Applicant's Response to the Office Action

In response to the objections raised by the Examiner with respect to claims 17 and 22-26, Applicant has rewritten the claims in independent form and has added new claims 29-34 which contain all of the limitations of the base claims and any intervening claims. Furthermore, Applicant respectfully submits that claims 7-28 are not anticipated or rendered obvious by the references cited by the Examiner above. For the reasons stated below, Applicant requests that the rejections and objections be withdrawn.

i. Description of the Cited Prior Art References

Yang is directed to a plug-in fluorescent lamp assembly which comprises a pre-wired electrical receptacle that is fixedly connected to a light box. At one end of the receptacle is a socket which receives the pins of a fluorescent lamp. At the opposite end of the receptacle is a terminal block that is detachably connected to a commercially available electronic ballast. According to the invention, the fluorescent lamp and/or ballast is removable and replaceable in the event of failure without removing the lightbox or disturbing the wiring of the receptacle.

Nilssen is directed to a ballasting system for an array of several series connected pairs of mutually parallel-oriented fluorescent lamps. Each lamp has a first and second pair of cathode terminals. The ballasting system comprises a relatively low-power first frequency converter means for starting the lamps, a high-power second frequency converter means for providing operating power to the lamps, first and second cathode transformers to provide cathode heating power, series resonant L-C ballast circuits for each pair of lamps and a delay means.

ii. Description of the Claims of the Present Invention

Claims 7 and 18 of the present invention are independent. Claims 8-17 depend from claim 7 while claims 19-28 depend from claim 18. Claims 7 is directed to a module for driving a gas discharge lamp in response to electrical power from a source. The module comprises means for receiving power from the source, and an oscillator coupled to the receiving means for transforming the received power to an output signal at a frequency and voltage for causing the lamp to produce visible light through gas discharge within the lamp. The module also comprises a circuit board having the oscillator mounted thereon, wherein the circuit board is integrally attached to the lamp.

Independent claim 18 is directed to a module for driving a gas discharge lamp in response to electrical power from a source. The module comprises means for receiving power from the source and an oscillator coupled to the receiving means for transforming the received power to an output signal at a frequency and voltage for causing the lamp to produce visible light through gas discharge within the lamp. The module also comprises a circuit board having the oscillator mounted thereon, wherein the circuit board is contained in a housing and the housing

is integrally attached to the lamp.

iii. Applicant's Response to the Rejections

As stated above, Applicant respectfully submits that independent claim 7 is not anticipated, nor rendered obvious, by Yang. For instance, Yang does not disclose, teach or suggest a circuit board which is integrally attached to the lamp. Instead, Yang discloses plug-in function modules having the necessary circuitry and components and disposable lamp ballasts comprising the lamp driver circuits. As shown in Figure 1 of Yang, lamps are plugged into socket 6. Circuit board 5 also plugs into socket 5. However, circuit board 5 of Yang is not integrally attached to the lamp.

Therefore, Applicant respectfully submits that independent claim 7 is not anticipated by Yang and requests that the §102(b) rejection be withdrawn. Furthermore, for the reasons stated above, Applicant respectfully submits that dependent claims 8, 10 and 15 are also not anticipated by Yang, and requests that the §102(b) rejection of these claims be withdrawn also. In addition, for the same reasons, Applicant respectfully submits that dependent claims 9 and 16 are not rendered obvious by Yang, and requests that the §103(a) rejection of these claims be withdrawn also. Finally, for the same reasons, Applicant respectfully submits that dependent claims 11-14 are not rendered obvious by Yang in view of Nilssen, and requests that the §103(a) rejection of these claims be withdrawn also.

Applicant further submits that claim 17, which was objected to by the Examiner, is not objectionable in light of the arguments above that it does not depend from a rejected claim.

Thus, Applicant respectfully requests that the Examiner withdraw the objection. In addition, Applicant has rewritten claim 17 as an independent claim. Thus, Applicant maintains that the new claim, specifically new claim 29, is allowable.

Applicant also respectfully submits that independent claim 18 is not anticipated, nor rendered obvious, by Yang. For instance, Yang does not disclose, teach or suggest a circuit board contained in a housing which is integrally attached to the lamp. As stated above, Yang instead discloses plug-in function modules having the necessary circuitry and components and disposable lamp ballasts comprising the lamp driver circuits. As shown in Figure 1 of Yang, lamps are plugged into socket 6. Circuit board 5 also plugs into socket 5. However, circuit board 5 of Yang is not contained in a housing which is integrally attached to the lamp.

Therefore, Applicant respectfully submits that independent claim 18 is not rendered obvious by Yang and requests that the §103 rejection be withdrawn. Furthermore, for the reasons stated above, Applicant respectfully submits that dependent claims 20 and 28 are also not rendered obvious by Yang, and requests that the §103 rejection of these claims be withdrawn also. In addition, for the same reasons, Applicant respectfully submits that dependent claims 19, 21 and 27 are not anticipated by Yang, and requests that the §102(b) rejection of these claims be withdrawn also.

Applicant further submits that claims 22-26, which were objected to by the Examiner, are not objectionable in light of the arguments above that they do not depend from a rejected claim. Thus, Applicant respectfully requests that the Examiner withdraw the objections. In addition,

Applicant has rewritten claims 22-26 as independent claims. Thus, Applicant maintains that the new claims, specifically new claims 30-34, are allowable.

Fees

Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademarks Office Deposit Account No. 12-2825.

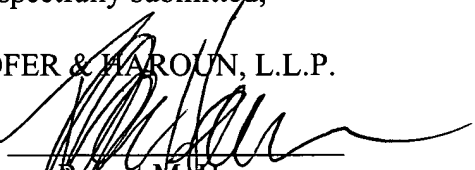
Conclusion

In view of the aforementioned amendment and remarks, it is respectfully submitted that all claims currently pending in the above identified application are now in condition for allowance, the earliest possible notice of which is earnestly solicited. If in the Examiner's opinion the prosecution of the present application would be advanced by a telephone interview, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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